



1

SEQUENCE LISTING

<110> DUCOMMUN, BERNARD  
MONSARRAT, BERNARD  
PRIGENT, CLAUDE

<120> NOVEL PHOSPHORYLATED SEQUENCES OF CDC25B PHOSPHATASE,  
ANTIBODIES DIRECTED AGAINST THESE SEQUENCES AS WELL AS  
THEIR USE

<130> 0508-1151

<140> 10/560,237

<141> 2005-12-12

<150> PCT/FR04/001416

<151> 2004-06-08

<150> FR 0307095

<151> 2003-06-12

<160> 11

<170> PatentIn Ver. 3.3

<210> 1

<211> 19

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (10)

<223> PHOSPHORYLATION

<400> 1

Thr	Pro	Val	Gln	Asn	Lys	Arg	Arg	Arg	Ser	Val	Thr	Pro	Pro	Glu	Glu
1				5					10					15	

Gln Gln Glu

<210> 2

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (7)

<223> PHOSPHORYLATION

<400> 2

Gln	Asn	Lys	Arg	Arg	Arg	Ser	Val	Thr	Pro	Pro	Glu	Glu	Gln
1				5					10				

<210> 3  
 <211> 566  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MOD\_RES  
 <222> (339)  
 <223> PHOSPHORYLATION

<400> 3  
 Met Glu Val Pro Gln Pro Glu Pro Ala Pro Gly Ser Ala Leu Ser Pro  
           1                  5                  10                  15  
 Ala Gly Val Cys Gly Gly Ala Gln Arg Pro Gly His Leu Pro Gly Leu  
                   20                  25                  30  
 Leu Leu Gly Ser His Gly Leu Leu Gly Ser Pro Val Arg Ala Ala Ala  
                   35                  40                  45  
 Ser Ser Pro Val Thr Thr Leu Thr Gln Thr Met His Asp Leu Ala Gly  
           50                  55                  60  
 Leu Gly Ser Arg Ser Arg Leu Thr His Leu Ser Leu Ser Arg Arg Ala  
           65                  70                  75                  80  
 Ser Glu Ser Ser Leu Ser Ser Glu Ser Ser Glu Ser Ser Asp Ala Gly  
                   85                  90                  95  
 Leu Cys Met Asp Ser Pro Ser Pro Met Asp Pro His Met Ala Glu Gln  
                   100                  105                  110  
 Thr Phe Glu Gln Ala Ile Gln Ala Ala Ser Arg Ile Ile Arg Asn Glu  
           115                  120                  125  
 Gln Phe Ala Ile Arg Arg Phe Gln Ser Met Pro Val Arg Leu Leu Gly  
           130                  135                  140  
 His Ser Pro Val Leu Arg Asn Ile Thr Asn Ser Gln Ala Pro Asp Gly  
           145                  150                  155                  160  
 Arg Arg Lys Ser Glu Ala Gly Ser Gly Ala Ala Ser Ser Ser Gly Glu  
                   165                  170                  175  
 Asp Lys Glu Asn Asp Gly Phe Val Phe Lys Met Pro Trp Lys Pro Thr  
                   180                  185                  190  
 His Pro Ser Ser Thr His Ala Leu Ala Glu Trp Ala Ser Arg Arg Glu  
           195                  200                  205  
 Ala Phe Ala Gln Arg Pro Ser Ser Ala Pro Asp Leu Met Cys Leu Ser  
           210                  215                  220  
 Pro Asp Arg Lys Met Glu Val Glu Glu Leu Ser Pro Leu Ala Leu Gly  
           225                  230                  235                  240  
 Arg Phe Ser Leu Thr Pro Ala Glu Gly Asp Thr Glu Glu Asp Asp Gly  
                   245                  250                  255

Phe Val Asp Ile Leu Glu Ser Asp Leu Lys Asp Asp Asp Ala Val Pro  
 260 265 270  
 Pro Gly Met Glu Ser Leu Ile Ser Ala Pro Leu Val Lys Thr Leu Glu  
 275 280 285  
 Lys Glu Glu Glu Lys Asp Leu Val Met Tyr Ser Lys Cys Gln Arg Leu  
 290 295 300  
 Phe Arg Ser Pro Ser Met Pro Cys Ser Val Ile Arg Pro Ile Leu Lys  
 305 310 315 320  
 Arg Leu Glu Arg Pro Gln Asp Arg Asp Thr Pro Val Gln Asn Lys Arg  
 325 330 335  
 Arg Arg Ser Val Thr Pro Pro Glu Glu Gln Gln Glu Ala Glu Glu Pro  
 340 345 350  
 Lys Ala Arg Val Leu Arg Ser Lys Ser Leu Cys His Asp Glu Ile Glu  
 355 360 365  
 Asn Leu Leu Asp Ser Asp His Arg Glu Leu Ile Gly Asp Tyr Ser Lys  
 370 375 380  
 Ala Phe Leu Leu Gln Thr Val Asp Gly Lys His Gln Asp Leu Lys Tyr  
 385 390 395 400  
 Ile Ser Pro Glu Thr Met Val Ala Leu Leu Thr Gly Lys Phe Ser Asn  
 405 410 415  
 Ile Val Asp Lys Phe Val Ile Val Asp Cys Arg Tyr Pro Tyr Glu Tyr  
 420 425 430  
 Glu Gly Gly His Ile Lys Thr Ala Val Asn Leu Pro Leu Glu Arg Asp  
 435 440 445  
 Ala Glu Ser Phe Leu Leu Lys Ser Pro Ile Ala Pro Cys Ser Leu Asp  
 450 455 460  
 Lys Arg Val Ile Leu Ile Phe His Cys Glu Phe Ser Ser Glu Arg Gly  
 465 470 475 480  
 Pro Arg Met Cys Arg Phe Ile Arg Glu Arg Asp Arg Ala Val Asn Asp  
 485 490 495  
 Tyr Pro Ser Leu Tyr Tyr Pro Glu Met Tyr Ile Leu Lys Gly Gly Tyr  
 500 505 510  
 Lys Glu Phe Phe Pro Gln His Pro Asn Phe Cys Glu Pro Gln Asp Tyr  
 515 520 525  
 Arg Pro Met Asn His Glu Ala Phe Lys Asp Glu Leu Lys Thr Phe Arg  
 530 535 540  
 Leu Lys Thr Arg Ser Trp Ala Gly Glu Arg Ser Arg Arg Glu Leu Cys  
 545 550 555 560

Ser Arg Leu Gln Asp Gln  
565

<210> 4

<211> 539

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (312)

<223> PHOSPHORYLATION

<400> 4

Met	Glu	Val	Pro	Gln	Pro	Glu	Pro	Ala	Pro	Gly	Ser	Ala	Leu	Ser	Pro	1	5	10	15
Ala	Gly	Val	Cys	Gly	Gly	Ala	Gln	Arg	Pro	Gly	His	Leu	Pro	Gly	Leu	20	25	30	
Leu	Leu	Gly	Ser	His	Gly	Leu	Leu	Gly	Ser	Pro	Val	Arg	Ala	Ala	Ala	35	40	45	
Ser	Ser	Pro	Val	Thr	Thr	Leu	Thr	Gln	Thr	Met	His	Asp	Leu	Ala	Gly	50	55	60	
Leu	Gly	Ser	Glu	Thr	Pro	Lys	Ser	Gln	Val	Gly	Thr	Leu	Leu	Phe	Arg	65	70	75	80
Ser	Arg	Ser	Arg	Leu	Thr	His	Leu	Ser	Leu	Ser	Arg	Arg	Ala	Ser	Glu	85	90	95	
Ser	Ser	Leu	Ser	Ser	Glu	Ser	Ser	Glu	Ser	Ser	Asp	Ala	Gly	Leu	Cys	100	105	110	
Met	Asp	Ser	Pro	Ser	Pro	Met	Asp	Pro	His	Met	Ala	Glu	Gln	Thr	Phe	115	120	125	
Glu	Gln	Ala	Ile	Gln	Ala	Ala	Ser	Arg	Ile	Ile	Arg	Asn	Glu	Gln	Phe	130	135	140	
Ala	Ile	Arg	Arg	Phe	Gln	Ser	Met	Pro	Asp	Gly	Phe	Val	Phe	Lys	Met	145	150	155	160
Pro	Trp	Lys	Pro	Thr	His	Pro	Ser	Ser	Thr	His	Ala	Leu	Ala	Glu	Trp	165	170	175	
Ala	Ser	Arg	Arg	Glu	Ala	Phe	Ala	Gln	Arg	Pro	Ser	Ser	Ala	Pro	Asp	180	185	190	
Leu	Met	Cys	Leu	Ser	Pro	Asp	Arg	Lys	Met	Glu	Val	Glu	Glu	Leu	Ser	195	200	205	
Pro	Leu	Ala	Leu	Gly	Arg	Phe	Ser	Leu	Thr	Pro	Ala	Glu	Gly	Asp	Thr	210	215	220	

Glu Glu Asp Asp Gly Phe Val Asp Ile Leu Glu Ser Asp Leu Lys Asp  
 225 230 235 240  
 Asp Asp Ala Val Pro Pro Gly Met Glu Ser Leu Ile Ser Ala Pro Leu  
 245 250 255  
 Val Lys Thr Leu Glu Lys Glu Glu Glu Lys Asp Leu Val Met Tyr Ser  
 260 265 270  
 Lys Cys Gln Arg Leu Phe Arg Ser Pro Ser Met Pro Cys Ser Val Ile  
 275 280 285  
 Arg Pro Ile Leu Lys Arg Leu Glu Arg Pro Gln Asp Arg Asp Thr Pro  
 290 295 300  
 Val Gln Asn Lys Arg Arg Arg Ser Val Thr Pro Pro Glu Glu Gln Gln  
 305 310 315 320  
 Glu Ala Glu Glu Pro Lys Ala Arg Val Leu Arg Ser Lys Ser Leu Cys  
 325 330 335  
 His Asp Glu Ile Glu Asn Leu Leu Asp Ser Asp His Arg Glu Leu Ile  
 340 345 350  
 Gly Asp Tyr Ser Lys Ala Phe Leu Leu Gln Thr Val Asp Gly Lys His  
 355 360 365  
 Gln Asp Leu Lys Tyr Ile Ser Pro Glu Thr Met Val Ala Leu Leu Thr  
 370 375 380  
 Gly Lys Phe Ser Asn Ile Val Asp Lys Phe Val Ile Val Asp Cys Arg  
 385 390 395 400  
 Tyr Pro Tyr Glu Tyr Glu Gly Gly His Ile Lys Thr Ala Val Asn Leu  
 405 410 415  
 Pro Leu Glu Arg Asp Ala Glu Ser Phe Leu Leu Lys Ser Pro Ile Ala  
 420 425 430  
 Pro Cys Ser Leu Asp Lys Arg Val Ile Leu Ile Phe His Cys Glu Phe  
 435 440 445  
 Ser Ser Glu Arg Gly Pro Arg Met Cys Arg Phe Ile Arg Glu Arg Asp  
 450 455 460  
 Arg Ala Val Asn Asp Tyr Pro Ser Leu Tyr Tyr Pro Glu Met Tyr Ile  
 465 470 475 480  
 Leu Lys Gly Gly Tyr Lys Glu Phe Phe Pro Gln His Pro Asn Phe Cys  
 485 490 495  
 Glu Pro Gln Asp Tyr Arg Pro Met Asn His Glu Ala Phe Lys Asp Glu  
 500 505 510  
 Leu Lys Thr Phe Arg Leu Lys Thr Arg Ser Trp Ala Gly Glu Arg Ser  
 515 520 525

Arg Arg Glu Leu Cys Ser Arg Leu Gln Asp Gln  
 530 535

<210> 5  
 <211> 580  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MOD\_RES  
 <222> (353)  
 <223> PHOSPHORYLATION

<400> 5  
 Met Glu Val Pro Gln Pro Glu Pro Ala Pro Gly Ser Ala Leu Ser Pro  
 1 5 10 15  
 Ala Gly Val Cys Gly Gly Ala Gln Arg Pro Gly His Leu Pro Gly Leu  
 20 25 30  
 Leu Leu Gly Ser His Gly Leu Leu Gly Ser Pro Val Arg Ala Ala Ala  
 35 40 45  
 Ser Ser Pro Val Thr Thr Leu Thr Gln Thr Met His Asp Leu Ala Gly  
 50 55 60  
 Leu Gly Ser Glu Thr Pro Lys Ser Gln Val Gly Thr Leu Leu Phe Arg  
 65 70 75 80  
 Ser Arg Ser Arg Leu Thr His Leu Ser Leu Ser Arg Arg Ala Ser Glu  
 85 90 95  
 Ser Ser Leu Ser Ser Glu Ser Ser Glu Ser Ser Asp Ala Gly Leu Cys  
 100 105 110  
 Met Asp Ser Pro Ser Pro Met Asp Pro His Met Ala Glu Gln Thr Phe  
 115 120 125  
 Glu Gln Ala Ile Gln Ala Ala Ser Arg Ile Ile Arg Asn Glu Gln Phe  
 130 135 140  
 Ala Ile Arg Arg Phe Gln Ser Met Pro Val Arg Leu Leu Gly His Ser  
 145 150 155 160  
 Pro Val Leu Arg Asn Ile Thr Asn Ser Gln Ala Pro Asp Gly Arg Arg  
 165 170 175  
 Lys Ser Glu Ala Gly Ser Gly Ala Ala Ser Ser Ser Gly Glu Asp Lys  
 180 185 190  
 Glu Asn Asp Gly Phe Val Phe Lys Met Pro Trp Lys Pro Thr His Pro  
 195 200 205  
 Ser Ser Thr His Ala Leu Ala Glu Trp Ala Ser Arg Arg Glu Ala Phe  
 210 215 220

Ala Gln Arg Pro Ser Ser Ala Pro Asp Leu Met Cys Leu Ser Pro Asp	225	230	235	240
Arg Lys Met Glu Val Glu Glu Leu Ser Pro Leu Ala Leu Gly Arg Phe		245	250	255
Ser Leu Thr Pro Ala Glu Gly Asp Thr Glu Glu Asp Asp Gly Phe Val		260	265	270
Asp Ile Leu Glu Ser Asp Leu Lys Asp Asp Asp Ala Val Pro Pro Gly		275	280	285
Met Glu Ser Leu Ile Ser Ala Pro Leu Val Lys Thr Leu Glu Lys Glu		290	295	300
Glu Glu Lys Asp Leu Val Met Tyr Ser Lys Cys Gln Arg Leu Phe Arg	305	310	315	320
Ser Pro Ser Met Pro Cys Ser Val Ile Arg Pro Ile Leu Lys Arg Leu		325	330	335
Glu Arg Pro Gln Asp Arg Asp Thr Pro Val Gln Asn Lys Arg Arg Arg		340	345	350
Ser Val Thr Pro Pro Glu Glu Gln Gln Glu Ala Glu Glu Pro Lys Ala		355	360	365
Arg Val Leu Arg Ser Lys Ser Leu Cys His Asp Glu Ile Glu Asn Leu		370	375	380
Leu Asp Ser Asp His Arg Glu Leu Ile Gly Asp Tyr Ser Lys Ala Phe	385	390	395	400
Leu Leu Gln Thr Val Asp Gly Lys His Gln Asp Leu Lys Tyr Ile Ser		405	410	415
Pro Glu Thr Met Val Ala Leu Leu Thr Gly Lys Phe Ser Asn Ile Val		420	425	430
Asp Lys Phe Val Ile Val Asp Cys Arg Tyr Pro Tyr Glu Tyr Glu Gly		435	440	445
Gly His Ile Lys Thr Ala Val Asn Leu Pro Leu Glu Arg Asp Ala Glu	450	455	460	
Ser Phe Leu Leu Lys Ser Pro Ile Ala Pro Cys Ser Leu Asp Lys Arg	465	470	475	480
Val Ile Leu Ile Phe His Cys Glu Phe Ser Ser Glu Arg Gly Pro Arg		485	490	495
Met Cys Arg Phe Ile Arg Glu Arg Asp Arg Ala Val Asn Asp Tyr Pro		500	505	510
Ser Leu Tyr Tyr Pro Glu Met Tyr Ile Leu Lys Gly Gly Tyr Lys Glu		515	520	525

Phe Phe Pro Gln His Pro Asn Phe Cys Glu Pro Gln Asp Tyr Arg Pro  
 530 535 540

Met Asn His Glu Ala Phe Lys Asp Glu Leu Lys Thr Phe Arg Leu Lys  
 545 550 555 560

Thr Arg Ser Trp Ala Gly Glu Arg Ser Arg Arg Glu Leu Cys Ser Arg  
 565 570 575

Leu Gln Asp Gln  
 580

<210> 6

<211> 601

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (374)

<223> PHOSPHORYLATION

<400> 6

Met Glu Val Pro Gln Pro Glu Pro Ala Pro Gly Ser Ala Leu Ser Pro  
 1 5 10 15

Ala Gly Val Cys Gly Gly Ala Gln Arg Pro Gly His Leu Pro Gly Leu  
 20 25 30

Leu Leu Gly Ser His Gly Leu Leu Gly Ser Pro Val Arg Ala Ala Ala  
 35 40 45

Ser Ser Pro Val Thr Thr Leu Thr Gln Thr Met His Asp Leu Ala Gly  
 50 55 60

Leu Gly Ser Arg Ser Arg Leu Thr His Leu Ser Leu Ser Arg Arg Ala  
 65 70 75 80

Ser Glu Ser Ser Leu Ser Ser Glu Ser Ser Glu Ser Ser Asp Ala Gly  
 85 90 95

Leu Cys Met Asp Ser Pro Ser Pro Met Asp Pro His Met Ala Glu Gln  
 100 105 110

Thr Phe Glu Gln Ala Ile Gln Ala Ala Ser Arg Ile Ile Arg Asn Glu  
 115 120 125

Gln Phe Ala Ile Arg Arg Phe Gln Ser Met Pro Val Arg Leu Leu Gly  
 130 135 140

His Ser Pro Val Leu Arg Asn Ile Thr Asn Ser Gln Ala Pro Asp Gly  
 145 150 155 160

Arg Arg Lys Ser Glu Ala Gly Ser Gly Ala Ala Ser Ser Ser Gly Glu  
 165 170 175



Asp	Lys	Glu	Asn	Val	Arg	Phe	Trp	Lys	Ala	Gly	Val	Gly	Ala	Leu	Arg	180	185	190	
Glu	Glu	Glu	Gly	Ala	Cys	Trp	Gly	Gly	Ser	Leu	Ala	Cys	Glu	Asp	Pro	195	200	205	
Pro	Leu	Pro	Ser	Trp	Leu	Gln	Asp	Gly	Phe	Val	Phe	Lys	Met	Pro	Trp	210	215	220	
Lys	Pro	Thr	His	Pro	Ser	Ser	Thr	His	Ala	Leu	Ala	Glu	Trp	Ala	Ser	225	230	235	240
Arg	Arg	Glu	Ala	Phe	Ala	Gln	Arg	Pro	Ser	Ser	Ala	Pro	Asp	Leu	Met	245	250	255	
Cys	Leu	Ser	Pro	Asp	Arg	Lys	Met	Glu	Val	Glu	Glu	Leu	Ser	Pro	Leu	260	265	270	
Ala	Leu	Gly	Arg	Phe	Ser	Leu	Thr	Pro	Ala	Glu	Gly	Asp	Thr	Glu	Glu	275	280	285	
Asp	Asp	Gly	Phe	Val	Asp	Ile	Leu	Glu	Ser	Asp	Leu	Lys	Asp	Asp	Asp	290	295	300	
Ala	Val	Pro	Pro	Gly	Met	Glu	Ser	Leu	Ile	Ser	Ala	Pro	Leu	Val	Lys	305	310	315	320
Thr	Leu	Glu	Lys	Glu	Glu	Glu	Lys	Asp	Leu	Val	Met	Tyr	Ser	Lys	Cys	325	330	335	
Gln	Arg	Leu	Phe	Arg	Ser	Pro	Ser	Met	Pro	Cys	Ser	Val	Ile	Arg	Pro	340	345	350	
Ile	Leu	Lys	Arg	Leu	Glu	Arg	Pro	Gln	Asp	Arg	Asp	Thr	Pro	Val	Gln	355	360	365	
Asn	Lys	Arg	Arg	Arg	Ser	Val	Thr	Pro	Pro	Glu	Glu	Gln	Gln	Glu	Ala	370	375	380	
Glu	Glu	Pro	Lys	Ala	Arg	Val	Leu	Arg	Ser	Lys	Ser	Leu	Cys	His	Asp	385	390	395	400
Glu	Ile	Glu	Asn	Leu	Leu	Asp	Ser	Asp	His	Arg	Glu	Leu	Ile	Gly	Asp	405	410	415	
Tyr	Ser	Lys	Ala	Phe	Leu	Leu	Gln	Thr	Val	Asp	Gly	Lys	His	Gln	Asp	420	425	430	
Leu	Lys	Tyr	Ile	Ser	Pro	Glu	Thr	Met	Val	Ala	Leu	Leu	Thr	Gly	Lys	435	440	445	
Phe	Ser	Asn	Ile	Val	Asp	Lys	Phe	Val	Ile	Val	Asp	Cys	Arg	Tyr	Pro	450	455	460	
Tyr	Glu	Tyr	Glu	Gly	Gly	His	Ile	Lys	Thr	Ala	Val	Asn	Leu	Pro	Leu	465	470	475	480

Glu Arg Asp Ala Glu Ser Phe Leu Leu Lys Ser Pro Ile Ala Pro Cys  
                                     485                                    490                                    495

Ser Leu Asp Lys Arg Val Ile Leu Ile Phe His Cys Glu Phe Ser Ser  
                                     500                                    505                                    510

Glu Arg Gly Pro Arg Met Cys Arg Phe Ile Arg Glu Arg Asp Arg Ala  
                                     515                                    520                                    525

Val Asn Asp Tyr Pro Ser Leu Tyr Tyr Pro Glu Met Tyr Ile Leu Lys  
                                     530                                    535                                    540

Gly Gly Tyr Lys Glu Phe Phe Pro Gln His Pro Asn Phe Cys Glu Pro  
                                     545                                    550                                    555                                    560

Gln Asp Tyr Arg Pro Met Asn His Glu Ala Phe Lys Asp Glu Leu Lys  
                                     565                                    570                                    575

Thr Phe Arg Leu Lys Thr Arg Ser Trp Ala Gly Glu Arg Ser Arg Arg  
                                     580                                    585                                    590

Glu Leu Cys Ser Arg Leu Gln Asp Gln  
                                     595                                    600

<210> 7

<211> 588

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (361)

<223> PHOSPHORYLATION

<400> 7

Met Glu Val Pro Gln Pro Glu Pro Ala Pro Gly Ser Ala Leu Ser Pro  
   1                                    5                                    10                                    15

Ala Gly Val Cys Gly Gly Ala Gln Arg Pro Gly His Leu Pro Gly Leu  
                                     20                                    25                                    30

Leu Leu Gly Ser His Gly Leu Leu Gly Ser Pro Val Arg Ala Ala Ala  
                                     35                                    40                                    45

Ser Ser Pro Val Thr Thr Leu Thr Gln Thr Met His Asp Leu Ala Gly  
                                     50                                    55                                    60

Leu Gly Ser Glu Thr Pro Lys Ser Gln Val Gly Thr Leu Leu Phe Arg  
                                     65                                    70                                    75                                    80

Ser Arg Ser Arg Leu Thr His Leu Ser Leu Ser Arg Arg Ala Ser Glu  
                                     85                                    90                                    95

Ser Ser Leu Ser Ser Glu Ser Ser Glu Ser Ser Asp Ala Gly Leu Cys  
                                     100                                    105                                    110

Met	Asp	Ser	Pro	Ser	Pro	Met	Asp	Pro	His	Met	Ala	Glu	Gln	Thr	Phe	115	120	125
Glu	Gln	Ala	Ile	Gln	Ala	Ala	Ser	Arg	Ile	Ile	Arg	Asn	Glu	Gln	Phe	130	135	140
Ala	Ile	Arg	Arg	Phe	Gln	Ser	Met	Pro	Val	Arg	Leu	Leu	Gly	His	Ser	145	150	155
Pro	Val	Leu	Arg	Asn	Ile	Thr	Asn	Ser	Gln	Ala	Pro	Asp	Gly	Arg	Arg	165	170	175
Lys	Ser	Glu	Ala	Gly	Ser	Gly	Ala	Ala	Ser	Ser	Ser	Gly	Glu	Asp	Lys	180	185	190
Glu	Asn	Val	Arg	Phe	Trp	Lys	Ala	Gly	Val	Gly	Ala	Leu	Arg	Glu	Glu	195	200	205
Glu	Gly	Ala	Cys	Trp	Gly	Gly	Ser	Leu	Ala	Cys	Glu	Asp	Pro	Pro	Leu	210	215	220
Pro	Ser	Trp	Leu	Gln	Asp	Gly	Phe	Val	Phe	Lys	Met	Pro	Trp	Lys	Pro	225	230	235
Thr	His	Pro	Ser	Ser	Thr	His	Ala	Leu	Ala	Glu	Trp	Ala	Ser	Arg	Arg	245	250	255
Glu	Ala	Phe	Ala	Gln	Arg	Pro	Ser	Ser	Ala	Pro	Asp	Leu	Met	Cys	Leu	260	265	270
Ser	Pro	Asp	Arg	Lys	Met	Glu	Val	Glu	Glu	Leu	Ser	Pro	Leu	Ala	Leu	275	280	285
Gly	Arg	Phe	Ser	Leu	Thr	Pro	Ala	Glu	Gly	Asp	Thr	Glu	Glu	Asp	Asp	290	295	300
Gly	Phe	Val	Asp	Ile	Leu	Glu	Ser	Asp	Leu	Lys	Asp	Leu	Val	Met	Tyr	305	310	315
Ser	Lys	Cys	Gln	Arg	Leu	Phe	Arg	Ser	Pro	Ser	Met	Pro	Cys	Ser	Val	325	330	335
Ile	Arg	Pro	Ile	Leu	Lys	Arg	Leu	Glu	Arg	Pro	Gln	Asp	Arg	Asp	Thr	340	345	350
Pro	Val	Gln	Asn	Lys	Arg	Arg	Arg	Ser	Val	Thr	Pro	Pro	Glu	Glu	Gln	355	360	365
Gln	Glu	Ala	Glu	Glu	Pro	Lys	Ala	Arg	Val	Leu	Arg	Ser	Lys	Ser	Leu	370	375	380
Cys	His	Asp	Glu	Ile	Glu	Asn	Leu	Leu	Asp	Ser	Asp	His	Arg	Glu	Leu	385	390	395
Ile	Gly	Asp	Tyr	Ser	Lys	Ala	Phe	Leu	Leu	Gln	Thr	Val	Asp	Gly	Lys	405	410	415

His Gln Asp Leu Lys Tyr Ile Ser Pro Glu Thr Met Val Ala Leu Leu  
 420 425 430  
 Thr Gly Lys Phe Ser Asn Ile Val Asp Lys Phe Val Ile Val Asp Cys  
 435 440 445  
 Arg Tyr Pro Tyr Glu Tyr Glu Gly Gly His Ile Lys Thr Ala Val Asn  
 450 455 460  
 Leu Pro Leu Glu Arg Asp Ala Glu Ser Phe Leu Leu Lys Ser Pro Ile  
 465 470 475 480  
 Ala Pro Cys Ser Leu Asp Lys Arg Val Ile Leu Ile Phe His Cys Glu  
 485 490 495  
 Phe Ser Ser Glu Arg Gly Pro Arg Met Cys Arg Phe Ile Arg Glu Arg  
 500 505 510  
 Asp Arg Ala Val Asn Asp Tyr Pro Ser Leu Tyr Tyr Pro Glu Met Tyr  
 515 520 525  
 Ile Leu Lys Gly Gly Tyr Lys Glu Phe Phe Pro Gln His Pro Asn Phe  
 530 535 540  
 Cys Glu Pro Gln Asp Tyr Arg Pro Met Asn His Glu Ala Phe Lys Asp  
 545 550 555 560  
 Glu Leu Lys Thr Phe Arg Leu Lys Thr Arg Ser Trp Ala Gly Glu Arg  
 565 570 575  
 Ser Arg Arg Glu Leu Cys Ser Arg Leu Gln Asp Gln  
 580 585

<210> 8  
 <211> 15  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> PHOSPHORYLATION

<400> 8  
 Ser Val Thr Pro Pro Glu Glu Gln Gln Glu Ala Glu Glu Pro Lys  
 1 5 10 15

<210> 9  
 <211> 14  
 <212> PRT  
 <213> Homo sapiens

<400> 9  
 Gln Asn Lys Arg Arg Arg Ser Val Thr Pro Pro Glu Glu Gln  
 1 5 10

<210> 10  
<211> 13  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (7)  
<223> PHOSPHORYLATION

<400> 10  
Met Glu Val Glu Glu Leu Ser Pro Leu Ala Leu Gly Arg  
1 5 10

<210> 11  
<211> 15  
<212> PRT  
<213> Homo sapiens

<400> 11  
Ser Val Thr Pro Pro Glu Glu Gln Gln Glu Ala Glu Glu Pro Lys  
1 5 10 15